

*A Presentation to the
Citizens Advisory Board (CAB)
Facilities Disposition and Site Remediation Committee*

M Area Inactive Process Sewer Lines (MIPSL) Operable Unit CAB Recommendation #236 2010 Update

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October 5, 2010

CAB	Citizens Advisory Board
CFM	Cubic Feet Per Minute
DOE-SR	Department of Energy - Savannah River
lbs	Pounds
MIPSL	M-Area Inactive Process Sewer Lines
PCE	Tetrachloroethylene
PER	Performance Evaluation Report
PPMV	Parts Per Million by Volume
SVE	Soil vapor extraction
TCE	Trichloroethylene
VOC	Volatile organic compound

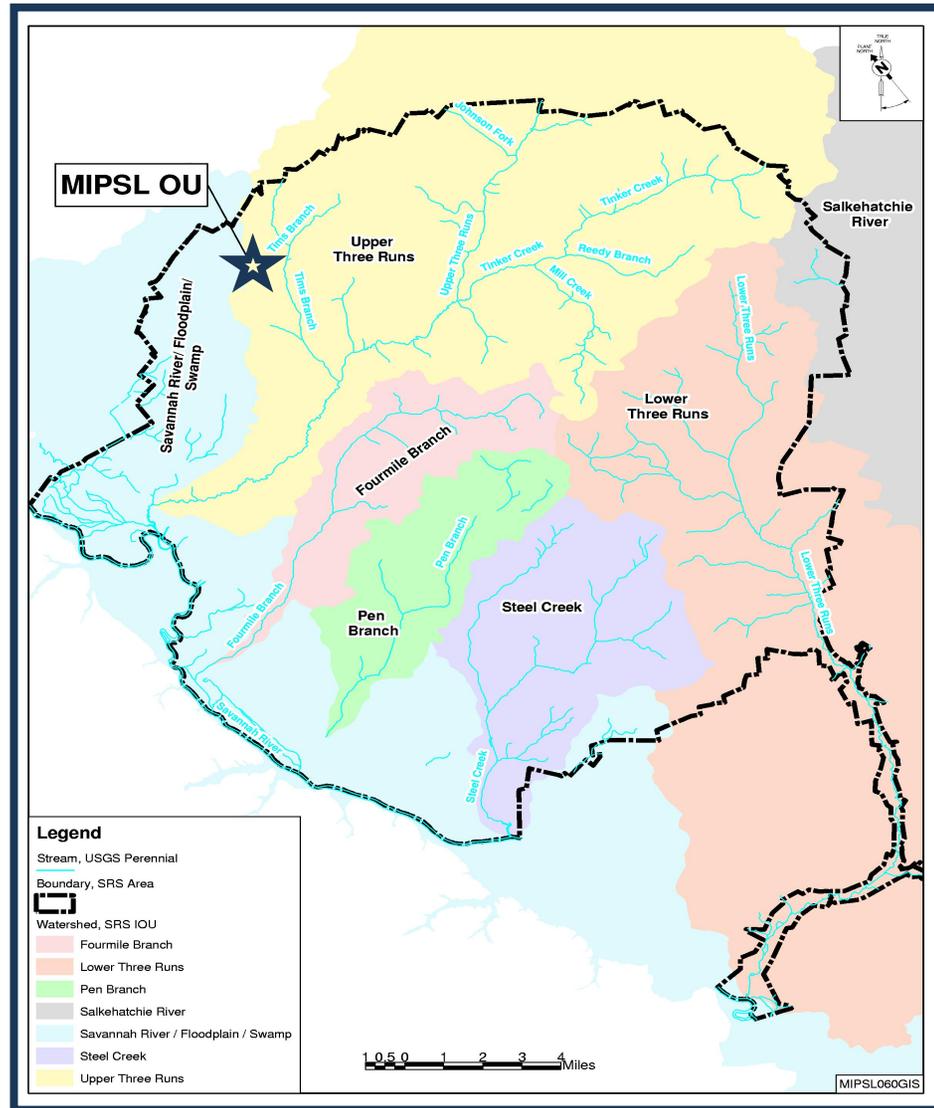
Citizens Advisory Board (CAB) Recommendation Number 236 – Soil Vapor Extraction with Soil Fracturing

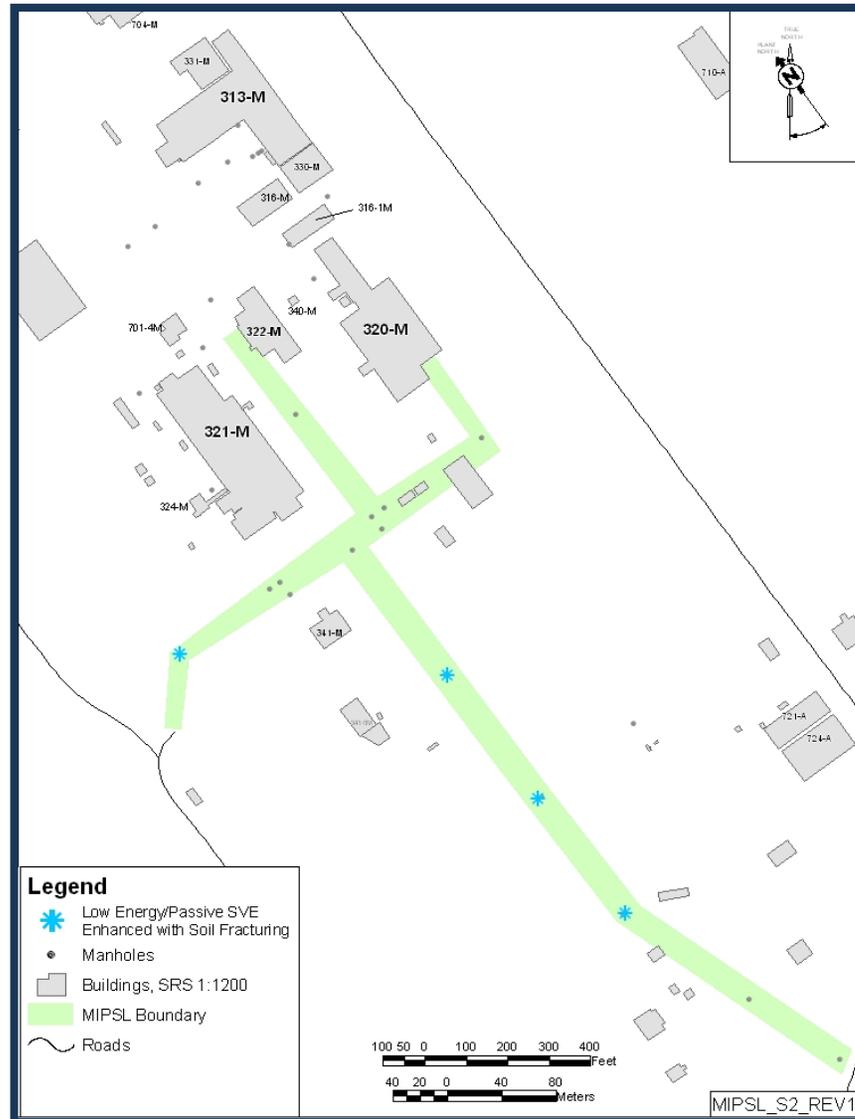
- **DOE provide annual updates on the potential spread of contaminants from M-Area Inactive Process Sewer Lines (MIPSL) Operable Unit (OU) and the amount of VOC mass removed by the remedial alternative.**
- **DOE conduct an investigation into the likelihood that pockets of low permeability soils with contamination may exist after the remedial technology is deployed and report the finding to the SRS CAB during the annual updates.**

Meeting Objective

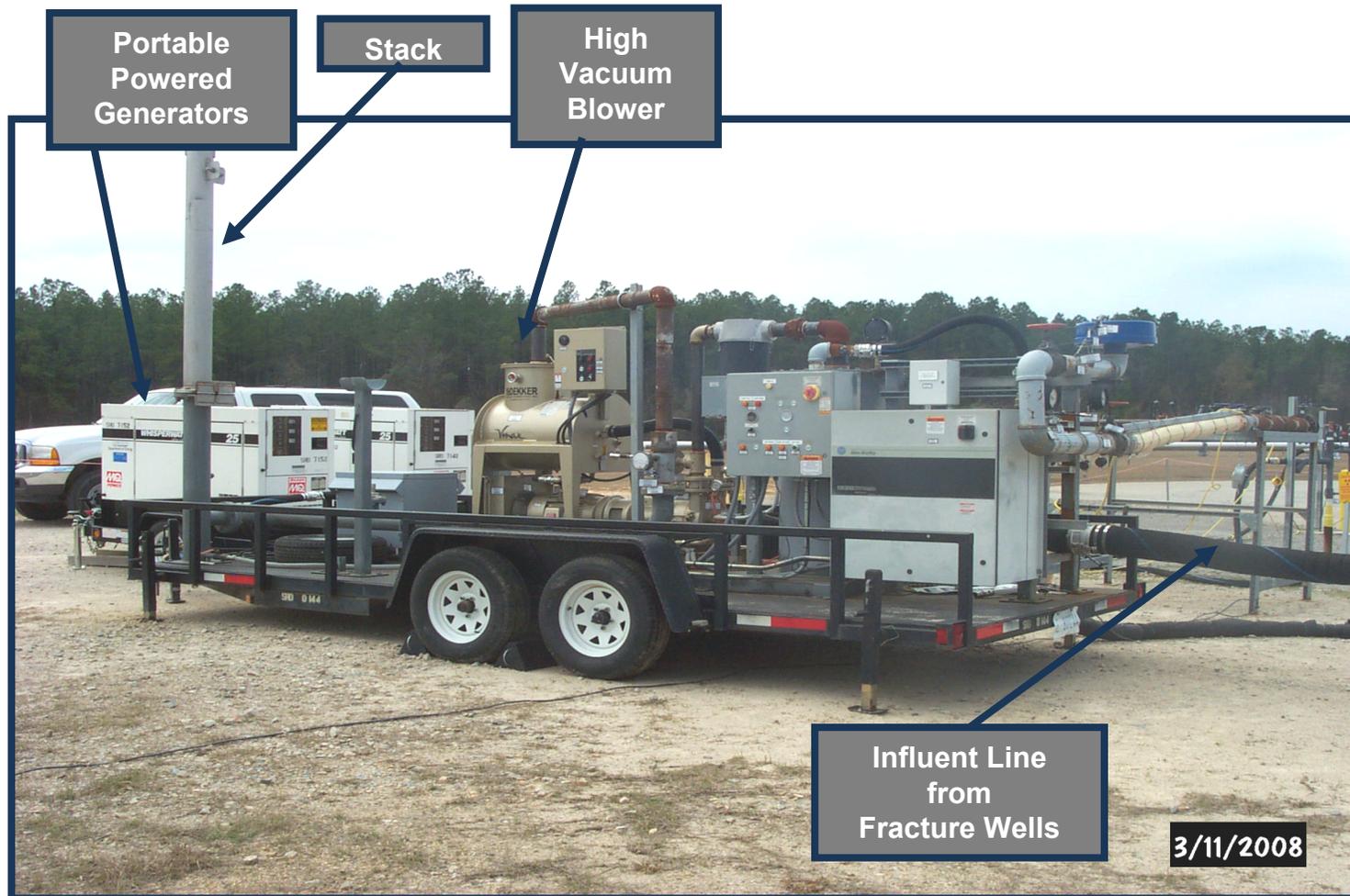
- To provide an annual update as required by CAB Recommendation #236 of the volatile organic compounds (VOCs) mass removed by the fracture-enhanced system at the MIPS L OU.

Operations Start	January 2008
1 st Annual Performance Evaluation Report (PER)	April 2009
1 st CAB Update	June 2009
2 nd PER	April 2010





Active SVE System



Passive SVE System



MIPSL OU

- **Three years of SVE operation**
- **The portable SVE unit cycled three times through four manhole well locations**

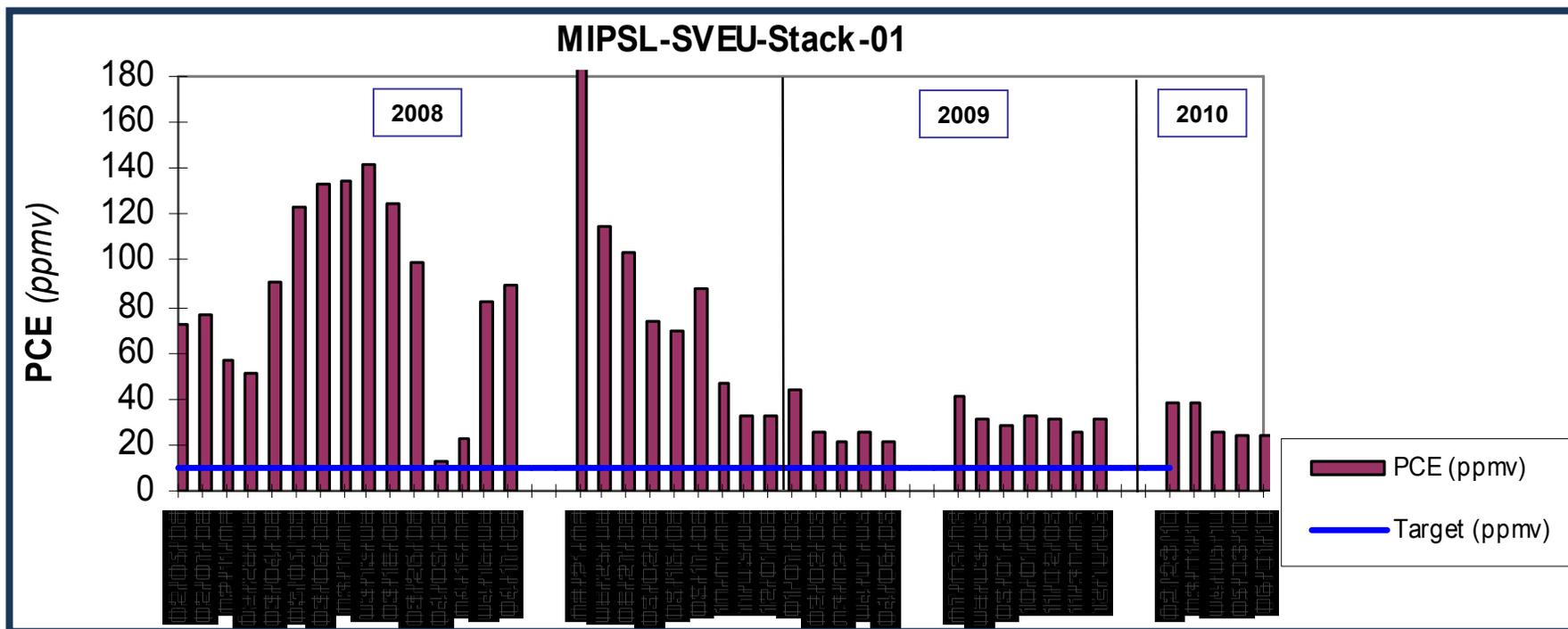
Water removal

VOC removal to 10 ppmv

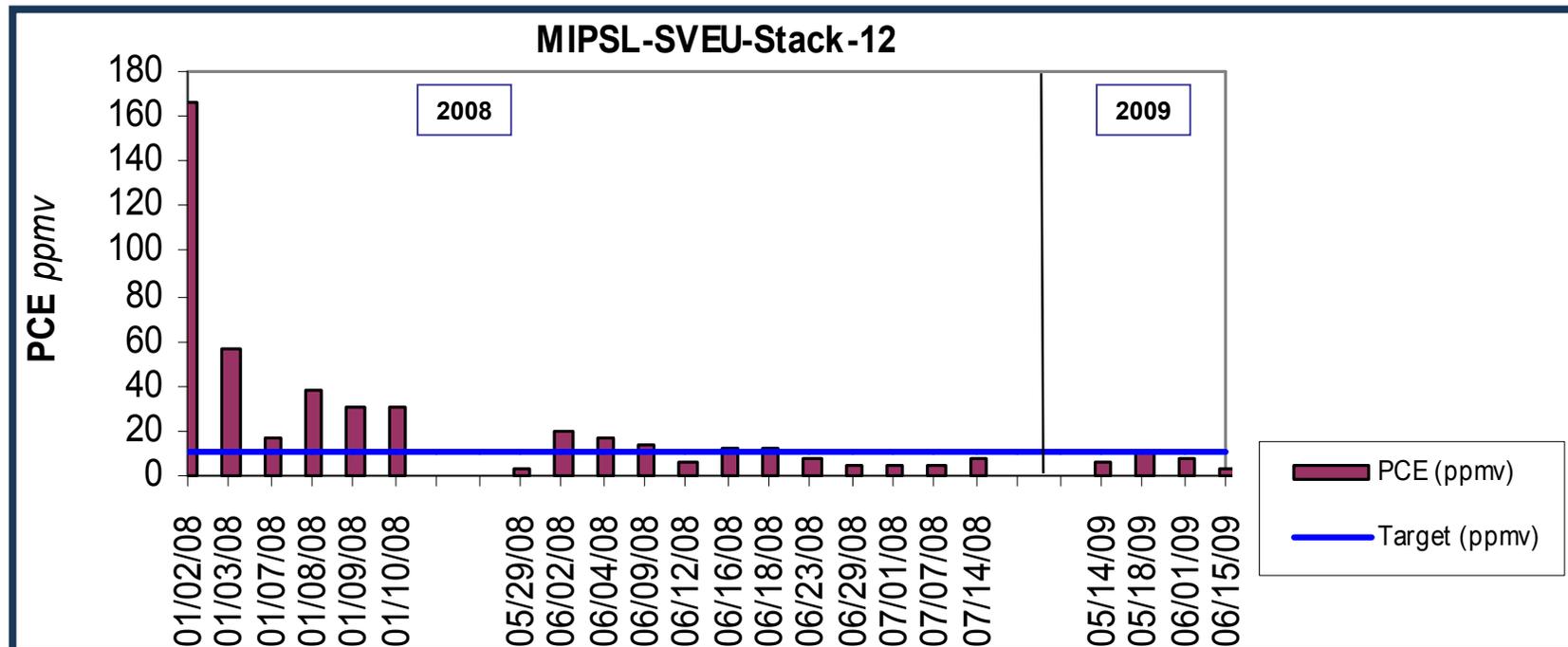
Confirm no rebound greater than 10 ppmv

- **Manholes 11, 12, 13 have operated through all three cycles and have transitioned to passive SVE (microblowers)**
- **Manhole 1 continues with active SVE**

Active SVE Performance



Active to Passive Transition Performance





2008 and 2009 Cumulative Mass Removal

Location	Hours Operated	(VOC) PCE Cumulative (lbs)	(VOC) TCE Cumulative (lbs)
Manhole 01	6763	1498	391
Manhole 11	414	1	<1
Manhole 12	964	66	3
Manhole 13	646	3	3

MIPSL OU Conclusions

- After three cycles of active SVE, Manholes 11, 12, and 13 have been transitioned to passive SVE
- Active SVE will resume if concentrations return to the 10 ppmv transition criteria
- After four cycles, Manhole 1 concentrations have been reduced from 160 to 20 ppmv, with only two of five wells greater than 10 ppmv
- The system is performing as intended
 - Year One:
 - 773 lbs. of PCE and 172 lbs of TCE (total VOC of 945 lbs) removed
 - Year Two:
 - 794 lbs of PCE and 225 lbs of TCE (total VOC of 1019 lbs) removed
 - Year Three:
 - The PER will be submitted in April 2011